



US 20130192201A1

(19) **United States**(12) **Patent Application Publication**  
**Kupratis et al.**(10) **Pub. No.: US 2013/0192201 A1**(43) **Pub. Date: Aug. 1, 2013**(54) **GEARED TURBOFAN GAS TURBINE ENGINE  
ARCHITECTURE****Publication Classification**(71) Applicant: **United Technologies Corporation**,  
Hartford, CT (US)(51) **Int. Cl.**  
**F02K 3/075** (2006.01)(72) Inventors: **Daniel Bernard Kupratis**, Wallingford,  
CT (US); **Frederick M. Schwarz**,  
Glastonbury, CT (US)(52) **U.S. Cl.**  
USPC ..... **60/226.3**(73) Assignee: **UNITED TECHNOLOGIES  
CORPORATION**, Hartford, CT (US)(57) **ABSTRACT**(21) Appl. No.: **13/645,626**(22) Filed: **Oct. 5, 2012****Related U.S. Application Data**(63) Continuation-in-part of application No. 13/363,154,  
filed on Jan. 31, 2012.(60) Provisional application No. 61/653,762, filed on May  
31, 2012.

A gas turbine engine typically includes a fan section, a compressor section, a combustor section and a turbine section. A speed reduction device such as an epicyclical gear assembly may be utilized to drive the fan section such that the fan section may rotate at a speed different than the turbine section so as to increase the overall propulsive efficiency of the engine. In such engine architectures, a shaft driven by one of the turbine sections provides an input to the epicyclical gear assembly that drives the fan section at a speed different than the turbine section such that both the turbine section and the fan section can rotate at closer to optimal speeds providing increased performance attributes and performance by desirable combinations of the disclosed features of the various components of the described and disclosed gas turbine engine.

